

Catalogue of American Amphibians and Reptiles.

Iverson, J.B., S.A. Pasachnik, C.R. Knapp, and S.D. Buckner. 2006. *Cyclura cychlura*.

***Cyclura cychlura* (Cuvier)
Northern Bahamian Rock Iguana**

Iguana cychlura Cuvier 1829:45. Type-locality, "Caroline", restricted to "Andros Island, Bahama Islands" by Schwartz and Carey (1977:37). Holotype, Muséum National d'Histoire Naturelle, Paris (MNHN) 2367, an adult in alcohol collected by F.-L. L'Herminier (date unknown; photographs by R. Bour [MNHN] examined by authors).

Cyclura baeolopha Cope 1862:123. Type-locality, "Andros Island, Bahamas". Holotype, Academy of Natural Sciences, Philadelphia (ANSP) 8120 (Malnate 1971), an adult male in alcohol, collected by H.C. Wood, Jr (date unknown; examined by JBI and SAP).

Cyclura cychlura: Stejneger 1905:334. *Ex errore*.

Cyclura bæalopha: Ditmars 1910:69. *Ex errore*.

Cyclura bacolopha: Railliet and Henry 1912:253. *Ex errore*.

Cyclura inornata Barbour and Noble 1916:151. Type-locality, "U. Cay in Allen's Harbor, near Highborn Cay, Bahamas." Holotype, Museum of Comparative Zoology, Harvard Univ. (MCZ) 11062 (Barbour and Loveridge 1929), an eviscerated, small adult female in alcohol, collected by C.J. Maynard on 2 March 1915 (examined by JBI and SAP).

Cyclura figginsii Barbour 1923:108. Type-locality, "Bitter Guana Cay, near Great Guana Cay, Exumas Group, Bahama Islands." Holotype, Museum of Comparative Zoology, Harvard Univ. (MCZ) 17745, a salted skin of an adult collected by A.M. Bailey in April 1923 (examined by JBI and SAP).

Cyclura baelopha: Hecht 1956:133. *Ex errore*.

Cyclura baleopha figginsii: Habermalz and Pietzsch 1973:336. *Ex errore*

Cyclura cychlura: Schwartz and Thomas 1975:112. First use of present combination.

Cyclura cychlura: Gibbons 1981:269. *Ex errore*.

• **CONTENT.** Three weakly defined subspecies are generally recognized: *Cyclura cychlura cychlura*, *Cyclura cychlura figginsii*, and *Cyclura cychlura inornata* (Schwartz and Carey 1977, Schwartz and Henderson 1991).

• **DEFINITION.** A medium to large species of the genus *Cyclura*, with males reaching 62 cm SVL and 128 cm TL, females reaching 57 cm SVL and 115 cm TL, and hatchlings measuring 8.8 to 10.0 cm SVL. Three to 7 (modally 5) scale rows between the frontal and interparietal scales. Azygous scales (modally 1) often present between the four prefrontal scales. Posterior canthal scale enlarged and elongate. Posterior pair of prefrontal scales enlarged and protuberant in large males. Six to 12 (modally 8) scales

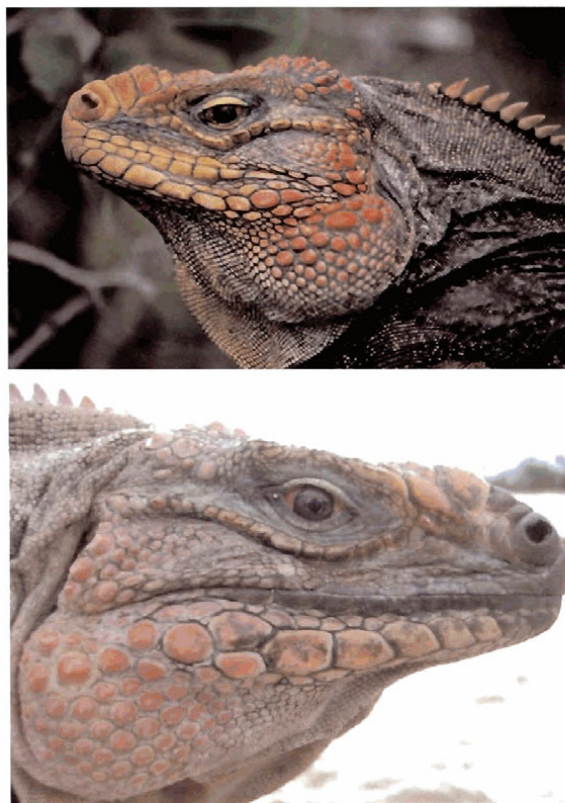


Figure 1. *C. c. cychlura* (upper), South Andros, Bahamas and *C. c. figginsii* (lower), Pasture Cay, southern Exumas, Bahamas. Photographs by Charles Knapp.

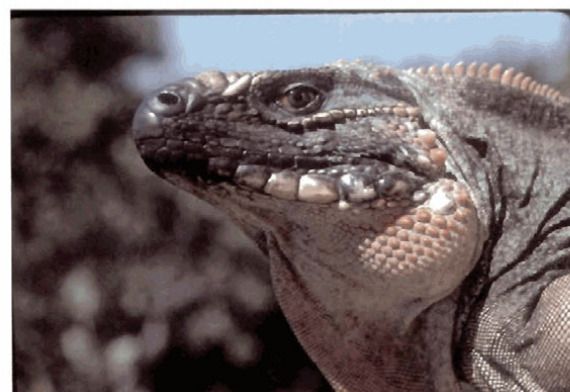


Figure 2. *C. c. inornata*, Leaf Cay, Allen Cays, Bahamas. Photograph by John Iverson.

bordering the frontal scale. First prefrontal almost always in contact with the precanthal scale. Four to 9 (modally 6) vertical rows of loreals. Nine to 17 (modally 16) suboculars to anterior border of tympanum. Rostral scale always in contact with nasal scales. Five to 9 (modally 7) sublabials (malars) to level of center of eye. One to 4 (modally 1) postmentals. Femoral pores in a single row, numbering 33–48. Dorsal crest scales between occiput and shoulder numbering 13–30; 37–83 (mean = 62) present between shoulder and sacrum; and 10–22 present between sacrum and first caudal verticil. Total dorsal crest scales between occiput and first caudal verticil num-



Figure 3. *C. c. figginsi*, Pasture Cay, southern Exumas, Bahamas. Photograph by Charles Knapp.

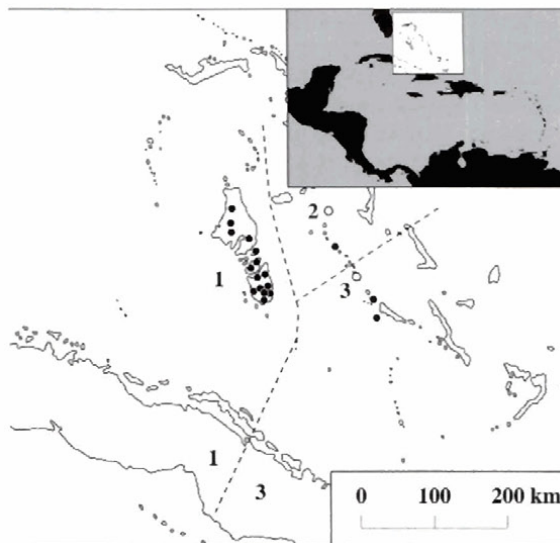
bering 67–118 (mean = 96). Dorsal crest scales on neck always higher than body crest scales. Variable in coloration, but adults (especially males) usually with a suffusion of red, orange or pink on the enlarged scales of the head and the dorsal crest scales. Background color of body black to dark gray-brown. Juveniles generally gray, but with 5–7 pale chevrons present dorsally, alternating with dark chevrons. [modified from Schwartz and Carey 1977].

• **DESCRIPTIONS.** General descriptions are in Barbour and Noble (1916), Schwartz and Carey (1977), and Alberts (2000).

• **ILLUSTRATIONS.** Color photographs are in Alberts (2000, head and anterior body of each subspecies, juvenile), Bendon (1997b, 2000b, head), Bosch (1991, anterior body and 3 of head), Blair (1994, 3 of head and body), Breen (1974, head and anterior body), Carey (1976, full body and head), Carey et al. (2001, head and anterior body of each subspecies, juvenile, 2 of habitat), Ehrig (1994, full body in habitat; 2000, head), Fuhri (2000, head), Iverson et al. (2004a, aerial of habitat), Knapp (1995b, head; 1998b, full body in habitat; 2001b, head; 2002, anterior body in hand; 2005, full body, and head and anterior body), Obst et al. (1988, head and anterior body), Sealey et al. (2002, full body in habitat, head and anterior body, and head), and Wright (1996, head and anterior body). Color drawings are in Bendon (1998, head). Black-and-white photographs are in Alberts (2004, adults basking on beach), Auffenberg (1976, entire animal), Bailey (1925, habitat, adult and sub-adult in habitat), Barbour and Noble (1916, top and side of head), Bendon (1994, head; 2000a, 3 of heads, 3 of anterior body; 2000c, 2 of head), Binns (2004, head of each subspecies), Buden (1981, head and anterior body), Ditmars (1910, lateral head and shoulders), Ehrig (1991, full body, and anterior body; 1992, 2 of habitat; 2000, anterior body in habitat, 2 of full body, 5 of heads; 2002, adult in habitat), Ehrig and Moyroud (1992a,b, 3 of full body in habitat), Franz et al. (1996, head and anterior body), Furrweger (1999, head), Gutman (2000, head, tail, bur-

row, 2 of full body), Henderson 2005 (head and body, Knapp (1995a, habitat, whole animal, and head; 1995b, habitat and full body; 1998b, 2 of anterior body in habitat; 1999, head, animal in field, habitat, dorsum of juvenile; 2003, habitat, full body, and head; 2004, adults in habitat; 2005, full body, skull, and head and anterior body), Knapp et al. 2005 (head and anterior body), Larimer and Pasachnik (2002, 5 of full body in habitat, 3 of full body in hand), Malone and Powell (2002, head), Moyroud (1992, full body), Nayer and Wade (1996, anterior body), and Valiulis et al. (2003, female defending nest, nest sites, anterior body). Black-and-white drawings are in Barbour (1923, top and side of head), Barbour and Noble (1916, top and side of head, tail, and foot), Bendon (1997a,c, 2004a,b, 2005, head; 2000a, dorsal, ventral and 4 lateral views of head), Burton (2004, top of head), Schwartz and Carey (1977, top and side of head), and Smith et al. (1990, copy of water color from John White; full body, possibly this species).

• **DISTRIBUTION.** *Cyclura cychlura* is found in the northern Bahama Islands, on and around Andros Island and on numerous islands in the Exuma Island chain (Schwartz and Henderson 1991, Franz et al. 1993, Knapp and Buckner 1998). This species has been introduced on several islands in the Exumas and off New Providence (Knapp 2001a, 2002, Iverson and Buckner, unpubl. obs.).



Map. Distribution of *Cyclura cychlura*. Circles indicate type localities, and dots mark other records.

• **FOSSIL RECORD.** No fossils are known, but the identity of fossils recovered from New Providence Island (Etheridge 1966, Campbell 1978, Pregill 1982) has yet to be investigated.

• **PERTINENT LITERATURE.** General works include Carey 1976, Coenen 1995, Iverson 2000, Iverson and Mamula 1989, Iverson et al. 2004a,b, and Schwartz and Carey (1977). Other topics are **anatomy and morphology** (Blob 2000, Burton 2004, Carter and Hayes 2004, de Quieroz 1987, Etheridge

1965, Fitch 1981, Gundy and Wurst 1976, Iverson, 1980, 1982, Iverson and Mamula 1989, Knapp 1988a, 2001a, Knapp and Owens 2005b, and Pregill 1981, 1986); **behavior** (Carey 1975, Carey et al. 2001, Carpenter 1982, Knapp 2000a,b, 2001a, Murphy 1969, Ord and Blumstein 2002, Ord et al. 2002, Weldon et al. 1993, Wilcox et al. 1973, and Windrow 1977); **captive husbandry** (Bosch 1991, Bowler 1977, Carey 1973, Ehrig 1993, Habermalz and Pietzsch 1973, Murphy 1969, Noegel 1989, Slavens and Slavens 1994, 1998, Snider and Bowler 1992, and Villers 2000); **conservation** (Alberts 2000, 2004, Auffenberg 1975, 1976, Blair 1991, Burghardt and Rand 1982, Buckner and Blair 2000, Hudson and Alberts 2004, Iverson 2000, Knapp 1999, 2000b, 2004, 2005, Knapp and Hudson 2004, Knapp et al. 1999, Malone 2000, Malone and Davis 2004, Malone et al. 2003, Pianka and Vitt 2003, and Westerman 1953); **ecology and natural history** (Auffenberg 1982, Bailey 1925, Ehrig and Moyroud 1992a, Hines et al. 2002, Iverson 1979, Iverson et al. 2004a, 2005, Knapp 1995a, 1999, 2000a,b, 2001a, Knapp and Owens 2004, 2005a,b, Knapp et al. 1999, 2004, 2005, Moyroud and Ehrig 1996, Rabb and Hayden 1957, Wilcox et al. 1973, and Windrow 1977); **parasites** (Durden and Knapp 2005, Geue and Löschner 2002, Leidy 1890, and Walton 1927); **phylogeny and systematics** (Burton 2004, Cope 1886, Crother 1999, de Queiroz 1982, Hollingsworth 1998, Knapp 1999, Knapp and Malone 2003, Malone 2000, Malone and Davis 2004, Malone and Powell 2002, Malone et al. 2000, 2003, Martins and Lamont 1998, Rassman 1997, Rassmann et al. 2004, and Wiens and Hollingsworth 2000); **physiology** (Frye et al. 1999, Pough 1973, Simpson et al. 1982); **reproduction** (Carey 1975, Hayes et al. 2004, Iverson 1979, Knapp 2000b, 2005, Knapp and Malone 2003, Knapp et al. 1999, 2004, 2005, and Wiewandt 1982). The species is included in the following **checklists and similar compendia**: Barbour 1904, 1914, 1930, 1935, 1937, Bendon 1994, 2000a, Blair 1991, 1994, Buden 1981, Campbell 1978, Cope 1885, 1887, Dodd 2003, Ehrig 1991, 2000, Ehrig and Moyroud 1992b, Etheridge 1960, 1982, Frank and Ramus 1995, Franz et al. 1993, Gutman 2000, Hollingsworth 2004, Honegger 1979, Knapp 1996, 1998b, 2003, Lang 1989, Larimer and Pasachnik 2002, MacLean et al. 1977, Marx 1958, Pianka and Vitt 2003, Powell et al. 1996, Schmidt 1936, Schwartz and Henderson 1985, 1988, 1991, Schwartz and Thomas 1975, Stejneger 1905, and Valiulis et al. 2003.

• **ETYMOLOGY.** The name *cyclura* is from the Greek *KYKLOS*, meaning a circle, and *OURA*, meaning tail, in reference to the round tail characteristic of this species and this genus. The different spellings of the genus and species names were apparently intentional by the respective authors. The subspecific name *figginsi* is a patronym honoring J.D. Figgins, former Director of the Colorado Museum of Natural History in Denver, who authorized the expedition during which the type specimens were collected. The

name *inornata* is from the Latin "inornatus", meaning undecorated or not beautiful, presumably a comparison between the only specimen available to the author (a dull-colored female) and the large, striking male specimens available for *C.c. cyclura* (then *C. baeolopha*).

• **COMMENT.** Molecular analyses by Malone et al. (2000, 2003) suggest that *C.c. figginsi* is paraphyletic with respect to *C.c. inornata*. Further morphological studies are needed to determine the phylogenetic relationships among the Exuma populations of *C. cyclura*, and hence to clarify the subspecific taxonomy.

1. *Cyclura cyclura cyclura* (Cuvier) *Andros Iguana*

Iguana cyclura Cuvier 1829:45. See species synonymy.

Cyclura baeolopha Cope 1862:123. See species synonymy.

Cyclura baeolopha: Hecht 1956:133. *Ex errore.*

Cyclura baeolopha baeolopha: Murphy 1969:39. *Ex errore.*

Cyclura cyclura cyclura: Schwartz and Thomas 1975:112. First use of present combination.

Cyclura carinata baeolopha: Auffenberg 1975:3. *Lapsus.*

Cyclura cyclura cyclura: Bendon 1997a:59. *Ex errore.*

• **DEFINITION.** Frontal scale usually separated from posterior prefrontals by 2 scale rows. Usually no scales (range 0 to 4) in suture between the four prefrontal scales. Typically 2 small scales present between the large, elongate, posterior canthal scale and the precanthal scale. Accessory scales usually present between the infralabial and sublabial (malar) scale rows. Usually only one postmental scale present. Rostrum light colored, yellow to orange in adult males. Total dorsal crest scales range from 84–108 (mean = 96.5). Color of at least prefrontals, dorsal spines, malar scales, and other enlarged head scales orange to red. Modal number of colic valves eight.

2. *Cyclura cyclura figginsi* Barbour *Exuma Iguana*

Cyclura figginsi Barbour 1923:108. See species synonymy.

Cyclura baeolopha figginsi: Hecht 1956:133.

Cyclura baeolopha figginsi: Murphy 1969:39. *Ex errore.*

Cyclura baeolopha figginsi: Habermalz and Pietzsch 1973:336. *Ex errore.*

Cyclura cyclura figginsi: Schwartz and Thomas 1975:112. First use of present combination.

Cyclura cyclura figginsi: Iverson 1980:85. *Ex errore.*

Cyclura cyclura figginsi: Gibbons 1981:269. *Ex errore.*

Cyclura cyclura figginsi: Knapp and Buckner 1998:

51. *Ex errore.*

• **DEFINITION.** Frontal scale usually separated from posterior prefrontals by 3 scale rows. Typically one scale (range 0 to 8) in suture between the 4 prefrontal scales. Usually no small scales present between the large, elongate, posterior canthal scale and the precanthal. Accessory scales usually absent between the infralabial and sublabial (malar) scale rows. Only one postmental scale usually present. Rostrum dark brown to dark gray, even in adult males. Total dorsal crest scales range from 67–118 (mean 93). Color of at least prefrontals, dorsal spines, malar scales, and other enlarged head scales red to orange. Modal number of colic valves seven.

3. *Cyclura cyclura inornata* Barbour and Noble Allen Cays Iguana

Cyclura inornata Barbour and Noble 1916:151. See species synonymy.

Cyclura cyclura inornata: Schwartz and Thomas 1975:112. First use of present combination.

• **DEFINITION.** Frontal scale usually separated from posterior prefrontals by 4 scale rows. Usually one scale (range 1 to 5) in suture between the 4 prefrontal scales. Two small scales typically present between the large, elongate, posterior canthal scale and the precanthal. Accessory scales usually present between the infralabial and sublabial (malar) scale rows. Two postmental scales usually present. Rostrum black to brownish black, even in large males. Total dorsal crest scales range from 83–110 (mean = 104.5). Color of at least prefrontals, dorsal spines, malar scales, and other enlarged head scales cream to pink to red. Modal number of colic valves seven.

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